



# Supervisor - Piling

QP Code: CON/Q0710

Version: 1.0

NSQF Level: 6

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### CON/Q0710: Supervisor - Piling

#### Brief Job Description

This job role is responsible for maintaining coordination among co-workers by providing information/ updates of activities, briefing the work plan to the subordinates, organising and deploying resources and supervising activities for construction of multiple pile foundations of an allotted area at the construction site. The individual should possess sound technical knowledge, should be able to monitor and maintain safe and quality working practices.

#### Personal Attributes

This job role requires the individual to be physically and mentally strong enough to oversee the activities involved piling works. The individual should be having strong organizational, interpersonal and communication skills, along with comprehensive technical knowledge of road laying works and ability to supervise construction crew.

#### Applicable National Occupational Standards (NOS)

##### Compulsory NOS:

1. [CON/N0732: Carry out coordination to facilitate pile construction work](#)
2. [CON/N0733: Organise and deploy resources as per work requirement in pile construction](#)
3. [CON/N0734: Supervise and monitor pile boring operation as per drawing/ specification](#)
4. [CON/N0735: Oversee fabrication of reinforcement cage and concreting work](#)
5. [CON/N9002: Manage workplace for safe and healthy work environment](#)

#### Qualification Pack (QP) Parameters

<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Rigging
<b>Country</b>	India
<b>NSQF Level</b>	6
<b>Credits</b>	NA



## Qualification Pack



<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2004/7215.90
<b>Minimum Educational Qualification &amp; Experience</b>	12th Class with 10-15 Years of experience as a certified Chargehand Piling OR 12th Class with 10-15 Years of experience in case of a Non trained worker, in same occupation
<b>Minimum Level of Education for Training in School</b>	
<b>Pre-Requisite License or Training</b>	Recommended training period of 16-20 weeks as per QP of Supervisor Piling
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	23/08/2015
<b>Next Review Date</b>	31/03/2022
<b>Deactivation Date</b>	31/03/2022
<b>NSQC Approval Date</b>	19/12/2018
<b>Version</b>	1.0
<b>Reference code on NQR</b>	2019/CON/CSDCI/03123
<b>NQR Version</b>	1.0



## CON/N0732: Carry out coordination to facilitate pile construction work

### Description

This unit describes the skills and knowledge required to carry out coordination to facilitate pile construction work

### Scope

This unit/ task covers the following:

- Inform concerned authorities about work status, material/ resource requirement
- Brief subordinate workers on work methods, safety norms and time lines

### Elements and Performance Criteria

#### *Inform concerned authorities about work status, material/ resource requirement*

To be competent, the user/individual on the job must be able to:

- PC1.** assist concerned engineer to make/ modify work plan and sequencing of activities by providing required information
- PC2.** report to the concerned engineer about daily labour strength and labour allocation
- PC3.** report concerned engineer about status of work with respect to planned target
- PC4.** inform concerned authorities for mobilization of resources as per sequence of multiple piles under construction
- PC5.** provide requirement of equipments for assigned works along with duration
- PC6.** provide inputs to concerned engineer regarding requirements for manpower, tools, and materials as per work requirements
- PC7.** place requirement of electrical arrangement to concerned authority
- PC8.** provide information to concerned authorities regarding equipment breakdown/ mobilization, work delay/ stoppage, quality issues and any anticipated causes that might obstruct work progress
- PC9.** analyze hazards in workplace and report to concerned authorities for necessary actions

#### *Brief subordinate workers on work methods, safety norms and time lines*

To be competent, the user/individual on the job must be able to:

- PC10.** brief subordinate workers about scopes and timelines to be adhered for respective activities
- PC11.** brief subordinate about use of tools, material handling/ storing practices and sequence of activities
- PC12.** provide information about hazards and risks involved in working at proximity to vehicle/ heavy construction equipments, deep excavated work spots, marshy/ muddy work areas etc
- PC13.** provide direction regarding PPEs to be used during piling operations
- PC14.** brief about standard hand signaling procedure to be adhered while working with loads such as material handling, pile boring, reinforcement cage lowering by equipments etc
- PC15.** provide direction for reporting procedure to be maintained during activity and under emergency situations



### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard practices for construction rigging works
- KU2.** safety rules and regulations for handling and storing required tools, equipment and materials
- KU3.** personal protection including the use of the related safety gears and equipment
- KU4.** service request procedures for tools, materials and equipments
- KU5.** statutory compliance requirements related to working at height
- KU6.** statutory compliance requirement related to workmen engagement
- KU7.** how to read relevant GFC drawings and extract technical specifications related to pile construction
- KU8.** standard procedure for material handling and stacking
- KU9.** sequence of piling operation as per agreed work plan
- KU10.** resource required and their specification based on construction drawing and piling operations
- KU11.** requirement of equipments, their nature as per scope of work
- KU12.** precaution to be taken to secure construction materials, equipments against natural calamity
- KU13.** manpower requirement for respective activities involved in piling operation
- KU14.** type of lighting arrangement required on the basis of nature of activity
- KU15.** installation of electrical outlets as per work requirement
- KU16.** approved code of practice related construction method and materials used for piling
- KU17.** standard work method statement and planned milestones
- KU18.** type of hazards in pavement construction works and its preventive work methods to be adhered by the workers
- KU19.** concept of job related safety precautions and deployment of safety policies to be observed at workplace

### Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in at least two language, preferably in the local language of the site and basic English
- GS2.** provide clear and simple instructions, details & sketches to subordinate
- GS3.** record and documents daily productivity report, daily labour attendance & details regarding works
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** read one or more language, preferably in the local language of the site
- GS6.** read drawing, rigging specification and standards
- GS7.** read key documents including quality standards, standards working methods & applicable tolerance limits



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- GS8.** read various, sign boards, safety rules and safety tags , instructions related to exit routes during emergency at the workplace
- GS9.** speak in one or more language, preferably in one of the local languages of the site
- GS10.** listen and follow instructions clearly given by the superior
- GS11.** provide clear instructions to subordinates for completion of task as per work plan, time schedule and quality
- GS12.** estimate required material and resources for work
- GS13.** decide alternate course of action in case of hindrance to work
- GS14.** determine plan for mobilization of resources basis sequence of works
- GS15.** determine requirement for electrical arrangement at site
- GS16.** plan work & organize required resource in coordination with team members and superior
- GS17.** plan work targets, allocate time schedule to sub-ordinates and organize completion of task within allocated time
- GS18.** ensure completion of work as per agreed time schedule and quality
- GS19.** engage with client as per requirements
- GS20.** report to concerned authority in case of any discrepancies in the quantity of materials and resources
- GS21.** assess quantity of materials for day work
- GS22.** optimize resources
- GS23.** minimize wastages
- GS24.** check for hazards at the site and report to necessary authority
- GS25.** check for quality issues, breakdown, etc. and report to necessary authority
- GS26.** assess complexity of the tasks and provide guidance for carrying out corrective action as per requirement
- GS27.** identify and assess how violation of any safety norms may lead to accidents
- GS28.** analyze and determine sequencing of piling works at site



## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Inform concerned authorities about work status, material/ resource requirement</i>	<b>29</b>	<b>29</b>	-	-
<b>PC1.</b> assist concerned engineer to make/ modify work plan and sequencing of activities by providing required information	3	3	-	-
<b>PC2.</b> report to the concerned engineer about daily labour strength and labour allocation	3	3	-	-
<b>PC3.</b> report concerned engineer about status of work with respect to planned target	3	3	-	-
<b>PC4.</b> inform concerned authorities for mobilization of resources as per sequence of multiple piles under construction	3	3	-	-
<b>PC5.</b> provide requirement of equipments for assigned works along with duration	3.5	3.5	-	-
<b>PC6.</b> provide inputs to concerned engineer regarding requirements for manpower, tools, and materials as per work requirements	3.5	3.5	-	-
<b>PC7.</b> place requirement of electrical arrangement to concerned authority	3.5	3.5	-	-
<b>PC8.</b> provide information to concerned authorities regarding equipment breakdown/ mobilization, work delay/ stoppage, quality issues and any anticipated causes that might obstruct work progress	3	3	-	-
<b>PC9.</b> analyze hazards in workplace and report to concerned authorities for necessary actions	3.5	3.5	-	-
<i>Brief subordinate workers on work methods, safety norms and time lines</i>	<b>21</b>	<b>21</b>	-	-
<b>PC10.</b> brief subordinate workers about scopes and timelines to be adhered for respective activities	3.5	3.5	-	-
<b>PC11.</b> brief subordinate about use of tools, material handling/ storing practices and sequence of activities	3.5	3.5	-	-





## Qualification Pack



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> provide information about hazards and risks involved in working at proximity to vehicle/ heavy construction equipments, deep excavated work spots, marshy/ muddy work areas etc	3.5	3.5	-	-
<b>PC13.</b> provide direction regarding PPEs to be used during piling operations	3.5	3.5	-	-
<b>PC14.</b> brief about standard hand signaling procedure to be adhered while working with loads such as material handling, pile boring, reinforcement cage lowering by equipments etc	3.5	3.5	-	-
<b>PC15.</b> provide direction for reporting procedure to be maintained during activity and under emergency situations	3.5	3.5	-	-
<b>NOS Total</b>	<b>50</b>	<b>50</b>	-	-



## Qualification Pack



### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N0732
<b>NOS Name</b>	Carry out coordination to facilitate pile construction work
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Rigging
<b>NSQF Level</b>	6
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	23/08/2015
<b>Next Review Date</b>	31/03/2022
<b>NSQC Clearance Date</b>	19/12/2018



# CON/N0733: Organise and deploy resources as per work requirement in pile construction

## Description

This unit describes the skills and knowledge required to organise and deploy resources as per work requirement in pile construction

## Scope

This unit/ task covers the following:

- Deploy equipments as per requirement of piling works
- Deploy material and manpower as per requirement of piling works

## Elements and Performance Criteria

### *Deploy equipments as per requirement of piling works*

To be competent, the user/individual on the job must be able to:

- PC1.** coordinate with vehicle/ equipment operators to correct job allocation of the same and avoid idle condition
- PC2.** ensure vehicle movement paths/ ramps are clearly defined, properly leveled/ slopped, compacted, illuminated, provided with adequate signage and free from any potential hazards
- PC3.** deploy transportation vehicles and construction equipments at specified work location as per work requirement
- PC4.** instruct equipment operators for pile boring, excavated soil disposal, earth filling, grading and compaction work
- PC5.** ensure borrow pits, trenches and other excavated spots are barricaded and illuminated properly
- PC6.** ensure vehicles and equipments deployed at site comply with statutory requirements
- PC7.** ensure efficient use of vehicle/ equipment by achieving targets and free rotational
- PC8.** report break down and unsafe condition observed in vehicle to concerned authority
- PC9.** ensure installation of traffic control signage, barriers and their periodical checks

### *Deploy material and manpower as per requirement of piling works*

To be competent, the user/individual on the job must be able to:

- PC10.** read and interpret drawing, work plan, logistic plan in order to oversee mobilization of resource as per sequence of piling
- PC11.** ensure mobilization of pile driving equipments and accessories at specified locations at appropriate time
- PC12.** ensure shifting and placing of materials and auxiliary equipments (bentonite powder bags, pumps and their accessories) to the correct locations in required quantity
- PC13.** coordinate with superior and respective authorities in order to arrange electrical outlets, lighting arrangements at specified locations as per requirement



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- PC14.** to concerned authorities for fuel required for operation of equipment, food required for workforce as and when necessary and technical supports required for survey points malfunctioning of electrical units
- PC15.** carry out necessary calculations regarding quantity requirements of consumable materials considering sequence and stage of activities and report to superior in advance
- PC16.** allocate manpower to specified piling locations as per work requirement considering state of completion
- PC17.** coordinate with sub-contractors to finalize work measurements and labour report

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard practices for construction rigging works
- KU2.** safety rules and regulations for handling and storing required tools, equipment and materials
- KU3.** personal protection including the use of the related safety gears and equipment
- KU4.** service request procedures for tools, materials and equipments
- KU5.** statutory compliance requirements related to working at height
- KU6.** selection and use of construction equipments and material transportation vehicles based on the work requirement
- KU7.** sequence of pavement construction activities
- KU8.** required specification/ capacity of construction equipments based on the sequence of pavement construction activities
- KU9.** condition of access route to be provided to the equipments used for pavement construction
- KU10.** planned productivity of equipments and effective method of job allocation to the same
- KU11.** standard work method statement and planned milestones
- KU12.** concept of work plan and logistics plan
- KU13.** documentation related pavement construction such as filling up check lists, permits, preparation of reports, material requisition and indents etc.
- KU14.** documentation required to resource management such as preparation of indents, material and manpower calculation, preparation of daily labour reports
- KU15.** concept of job related safety precautions and deployment of safety policies to be observed at workplace
- KU16.** type of lighting arrangement required on the basis of nature of activity
- KU17.** concept of quantity calculation of consumable materials used in piling works as per standard norms
- KU18.** manpower requirement for respective activities involved in piling operation
- KU19.** how to keep records of manpower and work measurements as per standard practices

### Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in at least two language, preferably in the local language of the site and basic English



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- GS2.** provide clear and simple instructions, details & sketches to subordinate
- GS3.** record and documents daily productivity report, daily labour attendance & details regarding works
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** read one or more language, preferably in the local language of the site
- GS6.** read drawing, rigging specification and standards
- GS7.** read key documents including quality standards, standards working methods & applicable tolerance limits
- GS8.** read various, sign boards, safety rules and safety tags , instructions related to exit routes during emergency at the workplace
- GS9.** speak in one or more language, preferably in one of the local languages of the site
- GS10.** listen and follow instructions clearly given by the superior
- GS11.** provide clear instructions to subordinates for completion of task as per work plan, time schedule and quality
- GS12.** estimate required material and resources for work
- GS13.** decide alternate course of action in case of hindrance to work
- GS14.** determine appropriateness and safety of vehicle movement paths at site
- GS15.** ensure suitable barricading and illumination of pits, trenches, etc.
- GS16.** determine suitable resource mobilization plan as per sequence of activities
- GS17.** determine correct locations and quantities for shifting of materials, tools, etc.
- GS18.** plan work & organize required resource in coordination with team members and superior
- GS19.** plan work targets, allocate time schedule to sub-ordinates and organize completion of task within allocated time
- GS20.** ensure completion of work as per agreed time schedule and quality
- GS21.** resolve and solve any conflict within the team
- GS22.** check for breakdowns / unsafe conditions and report on the same
- GS23.** assess quantity of materials for day work
- GS24.** optimize resources
- GS25.** minimize wastages
- GS26.** evaluate whether vehicles and equipment comply with regulations at site
- GS27.** assess complexity of the tasks and provide guidance for carrying out corrective action as per requirement
- GS28.** identify and assess how violation of any safety norms may lead to accidents



## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Deploy equipments as per requirement of piling works</i>	<b>26.5</b>	<b>26.5</b>	-	-
<b>PC1.</b> coordinate with vehicle/ equipment operators to correct job allocation of the same and avoid idle condition	3	3	-	-
<b>PC2.</b> ensure vehicle movement paths/ ramps are clearly defined, properly leveled/ slopped, compacted, illuminated, provided with adequate signage and free from any potential hazards	3	3	-	-
<b>PC3.</b> deploy transportation vehicles and construction equipments at specified work location as per work requirement	3	3	-	-
<b>PC4.</b> instruct equipment operators for pile boring, excavated soil disposal, earth filling, grading and compaction work	3	3	-	-
<b>PC5.</b> ensure borrow pits, trenches and other excavated spots are barricaded and illuminated properly	3	3	-	-
<b>PC6.</b> ensure vehicles and equipments deployed at site comply with statutory requirements	2.5	2.5	-	-
<b>PC7.</b> ensure efficient use of vehicle/ equipment by achieving targets and free rotational	3	3	-	-
<b>PC8.</b> report break down and unsafe condition observed in vehicle to concerned authority	3	3	-	-
<b>PC9.</b> ensure installation of traffic control signage, barriers and their periodical checks	3	3	-	-
<i>Deploy material and manpower as per requirement of piling works</i>	<b>23.5</b>	<b>23.5</b>	-	-
<b>PC10.</b> read and interpret drawing, work plan, logistic plan in order to oversee mobilization of resource as per sequence of piling	3	3	-	-
<b>PC11.</b> ensure mobilization of pile driving equipments and accessories at specified locations at appropriate time	2.5	2.5	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> ensure shifting and placing of materials and auxiliary equipments (bentonite powder bags, pumps and their accessories) to the correct locations in required quantity	3	3	-	-
<b>PC13.</b> coordinate with superior and respective authorities in order to arrange electrical outlets, lighting arrangements at specified locations as per requirement	3	3	-	-
<b>PC14.</b> to concerned authorities for fuel required for operation of equipment, food required for workforce as and when necessary and technical supports required for survey points malfunctioning of electrical units	3	3	-	-
<b>PC15.</b> carry out necessary calculations regarding quantity requirements of consumable materials considering sequence and stage of activities and report to superior in advance	3	3	-	-
<b>PC16.</b> allocate manpower to specified piling locations as per work requirement considering state of completion	3	3	-	-
<b>PC17.</b> coordinate with sub-contractors to finalize work measurements and labour report	3	3	-	-
<b>NOS Total</b>	<b>50</b>	<b>50</b>	-	-



## Qualification Pack



### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N0733
<b>NOS Name</b>	Organise and deploy resources as per work requirement in pile construction
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Rigging
<b>NSQF Level</b>	6
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	23/08/2015
<b>Next Review Date</b>	31/03/2022
<b>NSQC Clearance Date</b>	19/12/2018





# CON/N0734: Supervise and monitor pile boring operation as per drawing/ specification

## Description

This unit describes the skills and knowledge required to supervise and monitor pile boring operation as per drawing/ specification.

## Scope

This unit/ task covers the following:

- Ensure positioning of pile boring equipments/ assemblies as per work plan
- Supervise pile boring operation

## Elements and Performance Criteria

### *Ensure positioning of pile boring equipments/assemblies as per work plan*

To be competent, the user/individual on the job must be able to:

- PC1.** check and confirm erection and alignment of soil boring equipments is as per standard practice or manufacturers guidelines
- PC2.** ensure that the boring equipment is erected at a safe distance from surrounding structures, electrical lines, service lines or movements of vehicle
- PC3.** confirm that the boring location is free from hazard such as underground service lines, existing underground electrical cables
- PC4.** check and confirm that the base has adequate capacity to withstand load of the boring equipment
- PC5.** check, confirm and suggest specification of accessories and rigging gears to be fixed to the boring equipments as and when necessary
- PC6.** confirm reference survey points are available as per work requirement and preserved securely, prior to erect the boring equipments
- PC7.** ensure that the boring equipments comply with statutory requirements such as fit certificate from recognized authority, undergone servicing at scheduled interval
- PC8.** confirm that the equipment operator is licensed, considering the type of boring equipment deployed
- PC9.** ensure safety barrication, signage are erected as per work plan or work requirement and verified by authorized personnel
- PC10.** fill up required protocol, permits and checklists as per organizational norms prior to start boring

### *Supervise pile boring operation*

To be competent, the user/individual on the job must be able to:

- PC11.** read and interpret drawing, specification in order to confirm location/ grid of pile borehole
- PC12.** provide signal to equipment operator to align the rotary boring auger to specified boring location



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- PC13.** measure linear distance of rotary auger from given reference survey points to ensure accuracy of location of borehole
- PC14.** monitor boring operation up to the depth desired to lower the casing pipe according to the work plan
- PC15.** provide signal to crane operator to shift and lower casing pipe in to the borehole
- PC16.** confirm the location of borehole by conducting necessary measurements as per the drawing
- PC17.** monitor further boring activity using rotary auger/ bucket up to desired depth as per drawing

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard practices for construction rigging works
- KU2.** safety rules and regulations for handling and storing required tools, equipment and materials
- KU3.** personal protection including the use of the related safety gears and equipment
- KU4.** service request procedures for tools, materials and equipments
- KU5.** statutory compliance requirements related to working at height
- KU6.** statutory compliance requirement related to workmen engagement
- KU7.** concept of different pile boring equipments and their use in pile construction
- KU8.** standard procedure of erection and positioning of pile boring equipments
- KU9.** checks to be carried out while erecting boring equipments in order to avoid hazard/ accidents
- KU10.** nature of required base for positioning and erection of boring equipments
- KU11.** use of different rigging gears to be fixed to the soil boring equipment and their respective specification based on requirement of pile construction works
- KU12.** necessity of survey points and their implications on pile boring activities
- KU13.** statutory compliance to be maintained by the equipments
- KU14.** safety measures to be followed while using heavy construction equipment
- KU15.** necessary documentations as per organizational norms involved in pile boring activity
- KU16.** how to read relevant GFC drawings and extract technical specifications related to pile construction
- KU17.** standard method of hand signaling used for material handling by equipments
- KU18.** specification related to boring of pile and desired dimensions of the borehole based on diameter of the pile
- KU19.** concept of linear, areal and volumetric measurements their units and conversion of units
- KU20.** sequence of pile boring activity and checks involved during boring operation
- KU21.** how to fill up quality formats and their intervals as per quality norms

### Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in at least two language, preferably in the local language of the site and basic English



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- GS2.** provide clear and simple instructions, details & sketches to subordinate
- GS3.** record and documents daily productivity report, daily labour attendance & details regarding works
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** read one or more language, preferably in the local language of the site
- GS6.** read drawing, rigging specification and standards
- GS7.** read key documents including quality standards, standards working methods & applicable tolerance limits
- GS8.** read various, sign boards, safety rules and safety tags , instructions related to exit routes during emergency at the workplace
- GS9.** speak in one or more language, preferably in one of the local languages of the site
- GS10.** listen and follow instructions clearly given by the superior
- GS11.** provide clear instructions to subordinates for completion of task as per work plan, time schedule and quality
- GS12.** estimate required material and resources for work
- GS13.** decide alternate course of action in case of hindrance to work
- GS14.** determine suitability of erection, alignment and location of boring equipment
- GS15.** determine whether the equipment operator has the necessary licenses
- GS16.** plan work & organize required resource in coordination with team members and superior
- GS17.** plan work targets, allocate time schedule to sub-ordinates and organize completion of task within allocated time
- GS18.** ensure completion of work as per agreed time schedule and quality
- GS19.** resolve and solve any conflict within the team
- GS20.** assess quantity of materials for day work
- GS21.** optimize resources
- GS22.** minimize wastages
- GS23.** assess and evaluate whether boring equipment comply with statutory requirements
- GS24.** carry out necessary calculations to determine the appropriate location of the bore hole
- GS25.** determine whether boring is as per depth specified in drawings
- GS26.** assess complexity of the tasks and provide guidance for carrying out corrective action as per requirement
- GS27.** identify and assess how violation of any safety norms may lead to accidents



## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure positioning of pile boring equipments/assemblies as per work plan</i>	<b>29.5</b>	<b>29.5</b>	-	-
<b>PC1.</b> check and confirm erection and alignment of soil boring equipments is as per standard practice or manufacturers guidelines	3	3	-	-
<b>PC2.</b> ensure that the boring equipment is erected at a safe distance from surrounding structures, electrical lines, service lines or movements of vehicle	3	3	-	-
<b>PC3.</b> confirm that the boring location is free from hazard such as underground service lines, existing underground electrical cables	3	3	-	-
<b>PC4.</b> check and confirm that the base has adequate capacity to withstand load of the boring equipment	3	3	-	-
<b>PC5.</b> check, confirm and suggest specification of accessories and rigging gears to be fixed to the boring equipments as and when necessary	3	3	-	-
<b>PC6.</b> confirm reference survey points are available as per work requirement and preserved securely, prior to erect the boring equipments	2.5	2.5	-	-
<b>PC7.</b> ensure that the boring equipments comply with statutory requirements such as fit certificate from recognized authority, undergone servicing at scheduled interval	3	3	-	-
<b>PC8.</b> confirm that the equipment operator is licensed, considering the type of boring equipment deployed	3	3	-	-
<b>PC9.</b> ensure safety barrication, signage are erected as per work plan or work requirement and verified by authorized personnel	3	3	-	-
<b>PC10.</b> fill up required protocol, permits and checklists as per organizational norms prior to start boring	3	3	-	-
<i>Supervise pile boring operation</i>	<b>20.5</b>	<b>20.5</b>	-	-



## Qualification Pack



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> read and interpret drawing, specification in order to confirm location/ grid of pile borehole	3	3	-	-
<b>PC12.</b> provide signal to equipment operator to align the rotary boring auger to specified boring location	3	3	-	-
<b>PC13.</b> measure linear distance of rotary auger from given reference survey points to ensure accuracy of location of borehole	2.5	2.5	-	-
<b>PC14.</b> monitor boring operation up to the depth desired to lower the casing pipe according to the work plan	3	3	-	-
<b>PC15.</b> provide signal to crane operator to shift and lower casing pipe in to the borehole	3	3	-	-
<b>PC16.</b> confirm the location of borehole by conducting necessary measurements as per the drawing	3	3	-	-
<b>PC17.</b> monitor further boring activity using rotary auger/ bucket up to desired depth as per drawing	3	3	-	-
<b>NOS Total</b>	<b>50</b>	<b>50</b>	-	-



## Qualification Pack



### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N0734
<b>NOS Name</b>	Supervise and monitor pile boring operation as per drawing/ specification
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Rigging
<b>NSQF Level</b>	6
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	23/08/2015
<b>Next Review Date</b>	31/03/2022
<b>NSQC Clearance Date</b>	19/12/2018



# CON/N0735: Oversee fabrication of reinforcement cage and concreting work

## Description

This unit describes the skills and knowledge required to oversee fabrication of reinforcement cage and concreting work

## Scope

This unit/ task covers the following:

- Ensure fabrication and installation of reinforcement cages are as per specification
- Ensure concreting of piles are as per plan and specification

## Elements and Performance Criteria

### *Ensure fabrication and installation of reinforcement cages are as per specification*

To be competent, the user/individual on the job must be able to:

- PC1.** prepare/ review bar bending schedule as per applicable drawing
- PC2.** develop hand sketches for preparation of bar bending schedule
- PC3.** check reinforcement cages visually / by carrying out measurements and ensure that the reinforcement works are as per drawing/ specification including diameter of reinforcement bars are as per drawing spacing of the reinforcement bars are within tolerance limit number of reinforcement bar is per drawing length of reinforcement cages are according to drawing and overlaps are staggered as per specification reinforcement bars are appropriately bent and bents are free from cracks, shrinks clear cover to the installed cages are provided as per drawing (use of cover blocks at appropriate intervals) proper tying is provided to the reinforcement meshes and binding wires are of specific gauges bars are clean from cracks, dirt, mud, grease or any other unwanted materials according to specification
- PC4.** supervise lowering of reinforcement cage into the borehole by providing hand signals to crane/ equipment operator and instructing subordinates
- PC5.** supervise and monitor welding works in re-bar cages for extension of the same
- PC6.** conduct out necessary checks ensure top level of reinforcement cage is as per drawing
- PC7.** ensure sequence of works for multiple piles are as per plan and completion of works is as per timeline
- PC8.** offer completed reinforcement works for further quality checks
- PC9.** carry out necessary alteration/ repairing if fault found as per instruction from concerned authority/ quality guidelines
- PC10.** fill up required protocol, permits and checklists as per organizational / quality norms prior and post inspection of reinforcement works

### *Ensure concreting of piles are as per plan and specification*

To be competent, the user/individual on the job must be able to:

- PC11.** ensure flushing activity is over and the borehole has obtained required soil stabilisation



## Qualification Pack



- PC12.** ensure adequate bentonite slurry circulation has been carried out as per quality plan/ work method statement
- PC13.** ensure specified grade of concrete is poured for pile concreting work by checking batch slips at regular intervals
- PC14.** check concrete visually and report to concerned authority if poor quality or lack in workability are observed
- PC15.** ensure correct sequencing of concreting for multiple piles as per agreed work plan
- PC16.** oversee erection of tremie pipes/ hoppers and ensure the assembly is erected appropriately
- PC17.** ensure mud/ muck is cleared and disposed to specified location during concreting work
- PC18.** ensure completed concrete top is at specified level as per drawing
- PC19.** supervise chipping of pile head in order to expose re-bars and ensure chipping is done up to specified cut off level

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard practices for construction rigging works
- KU2.** safety rules and regulations for handling and storing required tools, equipment and materials
- KU3.** personal protection including the use of the related safety gears and equipment
- KU4.** service request procedures for tools, materials and equipments
- KU5.** statutory compliance requirements related to working at height
- KU6.** statutory compliance requirement related to workmen engagement
- KU7.** concept of different pile boring equipments and their use in pile construction
- KU8.** standard procedure of erection and positioning of pile boring equipments
- KU9.** checks to be carried out while erecting boring equipments in order to avoid hazard/ accidents
- KU10.** nature of required base for positioning and erection of boring equipments
- KU11.** use of different rigging gears to be fixed to the soil boring equipment and their respective specification based on requirement of pile construction works
- KU12.** necessity of survey points and their implications on pile boring activities
- KU13.** statutory compliance to be maintained by the equipments
- KU14.** safety measures to be followed while using heavy construction equipment
- KU15.** necessary documentations as per organizational norms involved in pile boring activity
- KU16.** how to read relevant GFC drawings and extract technical specifications related to pile construction
- KU17.** standard method of hand signaling used for material handling by equipments
- KU18.** specification related to boring of pile and desired dimensions of the borehole based on diameter of the pile
- KU19.** concept of linear, areal and volumetric measurements their units and conversion of units
- KU20.** sequence of pile boring activity and checks involved during boring operation
- KU21.** how to fill up quality formats and their intervals as per quality norms





### Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in at least two language, preferably in the local language of the site and basic English
- GS2.** provide clear and simple instructions, details & sketches to subordinate
- GS3.** record and documents daily productivity report, daily labour attendance & details regarding works
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** read one or more language, preferably in the local language of the site
- GS6.** read drawing, rigging specification and standards
- GS7.** read key documents including quality standards, standards working methods & applicable tolerance limits
- GS8.** read various, sign boards, safety rules and safety tags , instructions related to exit routes during emergency at the workplace
- GS9.** speak in one or more language, preferably in one of the local languages of the site
- GS10.** listen and follow instructions clearly given by the superior
- GS11.** provide clear instructions to subordinates for completion of task as per work plan, time schedule and quality
- GS12.** estimate required material and resources for work
- GS13.** decide alternate course of action in case of hindrance to work
- GS14.** determine whether reinforcement works are in line with drawings
- GS15.** determine whether top level of reinforcement cage is as per drawings
- GS16.** determine adequacy of bentonite slurry circulation
- GS17.** determine whether concrete top is as per level of the drawing
- GS18.** plan work & organize required resource in coordination with team members and superior
- GS19.** plan work targets, allocate time schedule to sub-ordinates and organize completion of task within allocated time
- GS20.** ensure completion of work as per agreed time schedule and quality
- GS21.** resolve and solve any conflict within the team
- GS22.** conduct necessary repair / modifications in case of deviation from quality standards
- GS23.** assess poor quality / lack of usability of concrete and report on the same
- GS24.** assess quantity of materials for day work
- GS25.** optimize resources
- GS26.** minimize wastages
- GS27.** assess and evaluate whether bore hole has achieved the necessary soilstabilization
- GS28.** assess complexity of the tasks and provide guidance for carrying out corrective action as per requirement
- GS29.** identify and assess how violation of any safety norms may lead to accidents
- GS30.** determine appropriate sequencing for piling works



## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure fabrication and installation of reinforcement cages are as per specification</i>	<b>27.5</b>	<b>27.5</b>	-	-
<b>PC1.</b> prepare/ review bar bending schedule as per applicable drawing	2.5	2.5	-	-
<b>PC2.</b> develop hand sketches for preparation of bar bending schedule	2.5	2.5	-	-
<b>PC3.</b> check reinforcement cages visually / by carrying out measurements and ensure that the reinforcement works are as per drawing/ specification including diameter of reinforcement bars are as per drawing spacing of the reinforcement bars are within tolerance limit number of reinforcement bar is per drawing length of reinforcement cages are according to drawing and overlaps are staggered as per specification reinforcement bars are appropriately bent and bents are free from cracks, shrinks clear cover to the installed cages are provided is as per drawing (use of cover blocks at appropriate intervals) proper tying is provided to the reinforcement meshes and binding wires are of specific gauges bars are clean from cracks, dirt, mud, grease or any other unwanted materials according to specification	5	5	-	-
<b>PC4.</b> supervise lowering of reinforcement cage into the borehole by providing hand signals to crane/ equipment operator and instructing subordinates	2.5	2.5	-	-
<b>PC5.</b> supervise and monitor welding works in re-bar cages for extension of the same	2.5	2.5	-	-
<b>PC6.</b> conduct out necessary checks ensure top level of reinforcement cage is as per drawing	2.5	2.5	-	-
<b>PC7.</b> ensure sequence of works for multiple piles are as per plan and completion of works is as per timeline	2.5	2.5	-	-
<b>PC8.</b> offer completed reinforcement works for further quality checks	2.5	2.5	-	-



## Qualification Pack



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC9.</b> carry out necessary alteration/ repairing if fault found as per instruction from concerned authority/ quality guidelines	2.5	2.5	-	-
<b>PC10.</b> fill up required protocol, permits and checklists as per organizational / quality norms prior and post inspection of reinforcement works	2.5	2.5	-	-
<i>Ensure concreting of piles are as per plan and specification</i>	<b>22.5</b>	<b>22.5</b>	-	-
<b>PC11.</b> ensure flushing activity is over and the borehole has obtained required soil stabilisation	2.5	2.5	-	-
<b>PC12.</b> ensure adequate bentonite slurry circulation has been carried out as per quality plan/ work method statement	2.5	2.5	-	-
<b>PC13.</b> ensure specified grade of concrete is poured for pile concreting work by checking batch slips at regular intervals	2.5	2.5	-	-
<b>PC14.</b> check concrete visually and report to concerned authority if poor quality or lack in workability are observed	2.5	2.5	-	-
<b>PC15.</b> ensure correct sequencing of concreting for multiple piles as per agreed work plan	2.5	2.5	-	-
<b>PC16.</b> oversee erection of tremie pipes/ hoppers and ensure the assembly is erected appropriately	2.5	2.5	-	-
<b>PC17.</b> ensure mud/ muck is cleared and disposed to specified location during concreting work	2.5	2.5	-	-
<b>PC18.</b> ensure completed concrete top is at specified level as per drawing	2.5	2.5	-	-
<b>PC19.</b> supervise chipping of pile head in order to expose re-bars and ensure chipping is done up to specified cut off level	2.5	2.5	-	-
<b>NOS Total</b>	<b>50</b>	<b>50</b>	-	-



## Qualification Pack



### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N0735
<b>NOS Name</b>	Oversee fabrication of reinforcement cage and concreting work
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Rigging
<b>NSQF Level</b>	6
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	23/08/2015
<b>Next Review Date</b>	31/03/2022
<b>NSQC Clearance Date</b>	19/12/2018



# CON/N9002: Manage workplace for safe and healthy work environment

## Description

This unit describes the skill and knowledge required to maintain a healthy & safe working environment for the group of people working under an individual

## Scope

This unit/task covers the following:

- Ensure healthy and safe working environment for subordinates.
- Ensure effective implementation of health, safety and environment policies and procedures
- Identify and respond to risks / fire and emergencies associated with the work practices, workplace and ensure related organizational & statutory requirement as followed

## Elements and Performance Criteria

### *Ensure healthy and safe working environment for subordinates*

To be competent, the user/individual on the job must be able to:

- PC1.** ensure proper housekeeping at workplace
- PC2.** implement safe handling , stacking methods at workplace / store
- PC3.** ensure that health and safety plan is followed by all subordinates
- PC4.** Identify any hazard in workplace and notify them to appropriate authority
- PC5.** ensure that all safety and protection installation are correctly placed & adequate
- PC6.** ensure safe access is available at work place for movement of workers & materials
- PC7.** ensure safe use of tools and tackles by the workmen as per applicability
- PC8.** ensure appropriate use of following Personal Protective Equipment (PPE) as per applicability: Head Protection (Helmets Ear Protection Fall Protection Foot Protection Face and Eye Protection, Hand &Body Protection Respiratory Protection
- PC9.** maintain entrances & exit from confined spaces , excavated pits and other location in concurrence with safety parameters or instruction from safety personals

### *Identify and respond to risks / fire and emergencies associated with the work practices, workplace and ensure related organizational & statutory requirement as followed*

To be competent, the user/individual on the job must be able to:

- PC10.** ensure organizational policies and procedures are followed for health , safety and welfare, in relation to: methods of receiving or sourcing information dealing with accidents and emergencies associated with the work and environment reporting stooping work evacuation fire risks and safe exit procedures
- PC11.** follow procedures for accident recording and reporting as per organizational and statutory requirements
- PC12.** ensure effective adherence to response to emergency procedures /protocols
- PC13.** report any case of emergency / risks to the concern people at the construction site
- PC14.** report any perceived risk hazards to the superiors / concerned EHS
- PC15.** demonstrate the use of fire protection equipments for different type of fire hazard



**PC16.** implement control measures to reduce risk & meet legal requirement as per organizational policies

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the policies, procedures and protocol set up by the EHS Department With respect to Health , Safety and Environment at the respective construction site
- KU2.** reporting procedures in cases of breaches or hazards in site safety, accidents or emergency situations
- KU3.** safe working practices for tools, tackles and equipment
- KU4.** workplace policies and health and safety requirements for dealing with potential risks as defined by the EHS department
- KU5.** how to respond to accidents & emergencies
- KU6.** the appropriate personal protective equipment to be used based on various working conditions
- KU7.** how to use necessary material ,tools, tackles and equipment in a safe and appropriate manner as specified by site EHS for each level and respective workman gang
- KU8.** monitoring working in workplace keeping safety & health in mind

### Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in one or more language
- GS2.** read in one or more language
- GS3.** read instructions, rules, guidelines, sign boards related to safety as per the requirements
- GS4.** speak in one or more language, preferably one of the local language at the site
- GS5.** listen and follow instructions shared by site EHS and superiors regarding site safety
- GS6.** communicate reporting of site conditions, hazards, accidents, etc.
- GS7.** decide upon the appropriate application & installation of safety equipments like barricades and nets
- GS8.** decide upon the tools box talks contents
- GS9.** identify any hazards in workplace organize safety equipments prior to commencing work
- GS10.** work to ensure safe and healthy environmental conditions at workplace
- GS11.** identify analysis & report hazards, accidents, health and safety risks, etc. or seek help from the appropriate authorities to address the same as per the guidelines laid down by site EHS
- GS12.** analyze areas of work which are potential safety hazards and could result in damage to life or property for the respective gang at the construction site
- GS13.** respond to critical health risks or accidents on an urgent basis through appropriate actions



## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure healthy and safe working environment for subordinates</i>	<b>25</b>	<b>25</b>	-	-
<b>PC1.</b> ensure proper housekeeping at workplace	2.5	2.5	-	-
<b>PC2.</b> implement safe handling , stacking methods at workplace / store	2.5	2.5	-	-
<b>PC3.</b> ensure that health and safety plan is followed by all subordinates	2.5	2.5	-	-
<b>PC4.</b> Identify any hazard in workplace and notify them to appropriate authority	2.5	2.5	-	-
<b>PC5.</b> ensure that all safety and protection installation are correctly placed & adequate	2.5	2.5	-	-
<b>PC6.</b> ensure safe access is available at work place for movement of workers & materials	2.5	2.5	-	-
<b>PC7.</b> ensure safe use of tools and tackles by the workmen as per applicability	2.5	2.5	-	-
<b>PC8.</b> ensure appropriate use of following Personal Protective Equipment (PPE) as per applicability: Head Protection (Helmets Ear Protection Fall Protection Foot Protection Face and Eye Protection, Hand &Body Protection Respiratory Protection	5	5	-	-
<b>PC9.</b> maintain entrances & exit from confined spaces , excavated pits and other location in concurrence with safety parameters or instruction form safety personals	2.5	2.5	-	-
<i>Identify and respond to risks / fire and emergencies associated with the work practices, workplace and ensure related organizational &amp; statutory requirement as followed</i>	<b>25</b>	<b>25</b>	-	-



## Qualification Pack



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> ensure organizational policies and procedures are followed for health , safety and welfare, in relation to: methods of receiving or sourcing information dealing with accidents and emergencies associated with the work and environment reporting stooping work evacuation fire risks and safe exit procedures	5	5	-	-
<b>PC11.</b> follow procedures for accident recording and reporting as per organizational and statutory requirements	2.5	2.5	-	-
<b>PC12.</b> ensure effective adherence to response to emergency procedures /protocols	3.75	3.75	-	-
<b>PC13.</b> report any case of emergency / risks to the concern people at the construction site	3.75	3.75	-	-
<b>PC14.</b> report any perceived risk hazards to the superiors / concerned EHS	3.75	3.75	-	-
<b>PC15.</b> demonstrate the use of fire protection equipments for different type of fire hazard	3.75	3.75	-	-
<b>PC16.</b> implement control measures to reduce risk & meet legal requirement as per organizational policies	2.5	2.5	-	-
<b>NOS Total</b>	<b>50</b>	<b>50</b>	-	-





### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N9002
<b>NOS Name</b>	Manage workplace for safe and healthy work environment
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic
<b>NSQF Level</b>	6
<b>Credits</b>	TBD
<b>Version</b>	1.1
<b>Last Reviewed Date</b>	23/03/2015
<b>Next Review Date</b>	31/03/2022
<b>NSQC Clearance Date</b>	19/05/2015

### Assessment Guidelines and Assessment Weightage

#### Assessment Guidelines

- 1.Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

#### Minimum Aggregate Passing % at QP Level : 70



## Qualification Pack



(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

### Assessment Weightage

#### Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N0732.Carry out coordination to facilitate pile construction work	50	50	-	-	100	20
CON/N0733.Organise and deploy resources as per work requirement in pile construction	50	50	-	-	100	30
CON/N0734.Supervise and monitor pile boring operation as per drawing/ specification	50	50	-	-	100	20
CON/N0735.Oversee fabrication of reinforcement cage and concreting work	50	50	-	-	100	20
CON/N9002.Manage workplace for safe and healthy work environment	50	50	-	-	100	10
<b>Total</b>	<b>250</b>	<b>250</b>	<b>-</b>	<b>-</b>	<b>500</b>	<b>100</b>



## Qualification Pack



### Acronyms

<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualifications Pack
<b>TVET</b>	Technical and Vocational Education and Training



## Qualification Pack



### Glossary

<b>Sector</b>	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards (OS)</b>	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
<b>Performance Criteria (PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards (NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack (QP)</b>	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
<b>Scope</b>	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
<b>Knowledge and Understanding (KU)</b>	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.



## Qualification Pack



<b>Organisational Context</b>	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/ Generic Skills (GS)</b>	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
<b>Electives</b>	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
<b>Options</b>	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.